

**IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA**

ARLINGTON INDUSTRIES, INC.,

Plaintiff,

v.

BRIDGEPORT FITTINGS, INC.,

Defendant.

CIVIL ACTION NO. 3:02-CV-0134

(JUDGE CAPUTO)

MEMORANDUM

Before the Court is a motion (Doc. 51) by Plaintiff Arlington Industries, Inc. to hold Defendant Bridgeport Fittings, Inc. in contempt for violating the Confession of Judgment and Injunction (Doc. 47) signed by the parties as part of a settlement agreement in 2004 and entered by this Court on January 18, 2012 (Doc. 46). The Court held a contempt hearing on October 25–26, 2012, December 17, 2012, and February 20, 2013. For the reasons explained below, the Court concludes that Arlington has demonstrated by clear and convincing evidence that Bridgeport is in contempt of the Confession of Judgment and Injunction. Accordingly, the Court will grant Arlington’s motion.

BACKGROUND

Plaintiff Arlington Industries, Inc. (“Arlington”) and Defendant Bridgeport Fittings, Inc. (“Bridgeport”) both manufacture electrical conduit fittings which are used to connect electrical wiring and cable. Previously, connecting a cable into an electrical junction box required the use of a threaded lock nut. In 1992, Arlington developed the “Snap-Tite” connector, which could simply be snapped into the junction box. Although tools were still required to secure the incoming cable to the connector, Arlington eliminated this problem in 1998 with a patented “Snap²It” connector that allowed a cable to be snapped into the connector, which together could then be snapped into the junction box. In 1999, Bridgeport

released a similar product line of quick-connect fittings called the “Snap-In” and “Speed-Snap” fittings.

On March 19, 2001, Arlington brought an action in this district, No. 3:01-CV-0485 (“the ‘0485 Action”), for infringement of U.S. Patents Nos. 5,266,050 (“050 Patent”) and 5,171,164 (“164 Patent”) against Bridgeport’s entire line of Snap-In connectors. That action was assigned to the Honorable Christopher C. Conner. Shortly thereafter, on January 28, 2002, Arlington filed the instant action for infringement of U.S. Patent No. 6,335,488 (the “488 Patent”) against a subset of Bridgeport’s products accused in the ‘0485 Action, namely the 590-DCS and 590-DCSI Speed-Snap connectors (the “Enjoined Connectors”), which was assigned to me. Although the ‘0485 action proceeded further than the instant action, both were settled as part of an April 17, 2004 settlement agreement.

Following settlement, Bridgeport released a new line of connectors which Arlington found similarly infringing, including the connectors currently at issue in this case: the “Whipper-Snap” 380SP and 38ASP connectors (the “Accused Connectors”). Judge Conner then reopened the ‘0485 Action and entered a confession of judgment on June 30, 2006. A jury subsequently found that 29 of those new products literally infringed the ‘050 Patent, that one infringed under the doctrine of equivalents, and that 26 of the new products were colorable imitations. See *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 692 F. Supp. 2d 487, 497 (M.D. Pa. 2010). Judge Conner entered a permanent injunction, which expired on December 4, 2011 along with the ‘050 Patent. *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, No. 3:01-CV-0485, 2010 WL 817519, at *8 (M.D. Pa. Mar. 9, 2010).

With the expiration of the ‘050 Patent, Arlington returned its attention to the instant matter which had been dormant for almost eight years.¹ It informed Bridgeport that while

¹ The Court entered an order on April 23, 2004 stating that the action would be dismissed without prejudice and that the Court would maintain continuing jurisdiction to enforce the terms of the parties’ Settlement Agreement. (Doc. 42.)

it was free to sell some of the products previously enjoined by the ‘050 Patent, the Accused Connectors were infringing the ‘488 Patent, which remains valid until 2018. Bridgeport nevertheless began selling the Accused Connectors, and, on January 18, 2012, Arlington filed an Unopposed Motion to Enter Defendant’s Confession of Judgment and Injunction. (Doc. 44.) That motion was granted, the matter was reopened, and the Clerk of Court was directed to enter the Confession of Judgment and Injunction. (Doc. 46.) In the Confession of Judgment and Injunction, Bridgeport submitted to entry of judgment that claim 1 of the ‘488 Patent “is infringed by the manufacture, sale and offer of sale” of Bridgeport’s 590-DCS and 590-DCSI Speed-Snap connectors. (Doc. 47 at ¶1.) The Confession of Judgment and Injunction also provided that Bridgeport was permanently enjoined from “directly or indirectly making, using, selling, offering for sale or importing” or causing or inducing others to make, use, sell, offer to sell, or import the 590-DCS and 590-DCSI Speed-Snap connectors or any colorable imitations thereof during the term of the ‘488 patent. (*Id.* at ¶ 2.)

To prohibit the sale of the Accused Connectors, on February 13, 2012, Arlington filed a motion for contempt for violating the above Confession of Judgment and Injunction. (Doc. 51.) In particular, Arlington moves for the Court to hold Bridgeport in contempt for violating the Confession of Judgment and Injunction by selling the Accused Connectors, permanently enjoin Bridgeport from making or selling the Accused Connectors, and award Arlington two times its lost profits for any Bridgeport sales made in violation of the Confession of Judgment and Injunction as well as attorneys’ fees incurred as a result of the contempt motion. A hearing was held on October 25–26, 2012, December 17, 2012, and February 20, 2013. The Court heard argument on the contempt motion at the hearing, but the parties did not address the issue of damages. The motion for contempt has been briefed and is now ripe for the Court’s review.

LEGAL STANDARDS

I. Motion for Contempt

To prevail on a motion for contempt in a patent case, “the party seeking to enforce the injunction must prove both that the newly accused product is not more than colorably different from the product found to infringe and that the newly accused product actually infringes.” *TiVo, Inc. v. EchoStar Corp.*, 646 F.3d 869, 882 (Fed. Cir. 2011) (en banc). The patentee bears the burden of proving violation of the injunction by clear and convincing evidence, a burden that applies to both the colorable differences and infringement inquiries. *Id.* “[C]ontempt ‘is a severe remedy, and should not be resorted to where there is a fair ground of doubt as to the wrongfulness of the defendant’s conduct.’” *Id.* at 881–82 (quoting *Cal. Artificial Stone Paving Co. v. Molitor*, 113 U.S. 609, 618 (1885)). Although contempt “is not a sword for wounding a former infringer who has made a good-faith effort to modify a previously adjudged or admitted infringing device to remain in the marketplace,” *Arbek Mfg., Inc. v. Moazzam*, 55 F.3d 1567, 1570 (Fed Cir. 1995), “an assertion that one has . . . designed around a patent should not be used to mask continued infringement.” *TiVo*, 646 F.3d at 883.

“[T]he contempt analysis must focus initially on the differences between the features relied upon to establish infringement and the modified features of the newly accused products.” *Id.* at 882. “The primary question on contempt should be whether the newly accused product is so different from the product previously found to infringe that it raises a fair ground of doubt as to the wrongfulness of the defendant’s conduct.” *Id.* (internal quotation marks omitted). If the differences between the modified features and those previously found to infringe “are significant, the newly accused product as a whole shall be deemed more than colorably different from the . . . infringing one, and the inquiry into whether the newly accused product actually infringes is irrelevant. Contempt is then inappropriate.” *Id.* However, “when a court concludes that there are no more than colorable differences between the . . . infringing product and modified product, a finding that the newly accused product continues to infringe the relevant claims is

additionally essential for a violation of an injunction against infringement.” *Id.* at 883.

II. Colorable Differences Analysis

In *TiVo*, the United States Court of Appeals for the Federal Circuit explained that the “colorable differences” analysis “must focus initially on the differences between the features relied upon to establish infringement and the modified features of the newly accused products.” 646 F.3d at 882. Specifically, the Federal Circuit emphasized:

The analysis must focus . . . on those aspects of the accused product that were previously alleged to be, and were a basis for, the prior finding of infringement, and the modified features of the newly accused product. Specifically, one should focus on those elements of the adjudged infringing products that the patentee previously contended, and proved, satisfy specific limitations of the asserted claims. Where one or more of those elements previously found to infringe has been modified, or removed, the court must make an inquiry into whether that modification is significant.

Id. The significance of the difference is a question of fact and is dependent on the nature of the products at issue. *Id.* at 882–83. “[T]he innovative significance of the modification is best viewed in light of the existing art and from the perspective of one of ordinary skill in the art.” *Id.* at 883 n.1. Thus, this Court must directly compare the elements of an accused product that previously were specifically identified or accused by the patentee as meeting a disputed claim limitation, and any subsequent modifications made by the accused infringer to those specifically accused elements.

An accused product is a colorable imitation of an enjoined product if it is the substantial equivalent of the enjoined product. An accused device is the substantial equivalent of an enjoined device if it performs substantially the same function in substantially the same way with substantially the same result. See *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950); *KSM Fastening Sys., Inc. v. H.A. Jones Co., Inc.*, 776 F.2d 1522, 1527–28 (Fed. Cir. 1985). The Court may compare the accused product to the patentee’s commercial embodiment. See *Merial Ltd. v. Cipla Ltd.*, 681 F.3d 1283, 1301 (Fed. Cir. 2012).

III. Claim Construction

An inventor may assert ownership only over those designs encompassed within

the claims section of the patent. See 35 U.S.C. §112; *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 63 (1998); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc), *cert. denied*, 546 U.S. 1170 (2006). Claim construction requires the court to determine the “ordinary and customary meaning” of the claim terms as they would be understood by “a person of ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1312–13. Intrinsic evidence—*i.e.*, the language of the patent (namely the language of the claim and specification) and the prosecution history—are the “primary resources” reviewing courts use to construe claims. *Kara Tech v. Stamps.com, Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009). The court may use extrinsic evidence, such as dictionaries, treatises, and expert testimony, to aid in claim construction, but such evidence is “less significant than the intrinsic record” and is “unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Phillips*, 415 F.3d at 1317–19, 1324; see also *Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1355–56 (Fed. Cir. 2004).

In using the language of the patent itself, “claims ‘must be read in view of the specification,’ . . . [which] is the single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1315 (citing *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996) and *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Likewise, “the claims themselves provide substantial guidance as to the meaning of particular claim terms.” *Id.* at 1314 (citing *Vitronics*, 90 F.3d at 1582). To this end, the context in which a claim term is used, the language of other claims in the patent, and the differences among claims can assist the court in construing disputed claim terms. See *id.* at 1314–15.

IV. Infringement

A. Direct Infringement

“[F]or a party to be liable for direct patent infringement under 35 U.S.C. § 271(a), [it] must commit all the acts necessary to infringe the patent, either personally or vicariously.” *Akami Tech., Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301, 1307 (Fed.

Cir. 2012). “In the context of a method claim, that means the accused infringer must perform all the steps of the claimed method, either personally or through another acting under his direction or control.” *Id.* Because direct infringement is a strict liability tort, the Federal Circuit has “rejected claims of liability for direct infringement of method claims in which several parties have collectively committed the acts necessary to constitute direct infringement, but no single party has committed all of the required acts.” *Id.*

B. Indirect Infringement

There are two types of indirect infringement: induced infringement and contributory infringement. Induced infringement occurs where a party “knowingly induced infringement and possessed specific intent to encourage another’s infringement.” 35 U.S.C. § 271(b); *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 851 (Fed. Cir. 2010); see also *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1321–22 (Fed. Cir. 2009) (“[T]he plaintiff has the burden of showing that the alleged infringer’s actions induced infringing acts and that he knew or should have known his actions would influence actual infringement.”) For purposes of inducement, “[i]t is enough that the inducer ‘cause[s], encourage[s], or aid[s]’ the infringing conduct and that the induced conduct is carried out.” *Akami*, 692 F.3d at 1308 (quoting *Arris Grp., Inc. v. British Telecomms. PLC*, 639 F.3d 1368, 1379 n. 13 (Fed. Cir. 2011)). A defendant may be held liable for induced infringement of a method patent pursuant to § 271(b) if it has performed some of the steps of a claimed method and has induced other parties to commit the remaining steps, or if it has induced other parties to collectively perform all the steps of the claimed method, but no single party has performed all of the steps itself. *Id.* at 1308–09.

Contributory infringement occurs pursuant to 35 U.S.C. § 271(c) where a party “sells, or offers to sell, a material or apparatus for use in practicing a patented process.” *i4i*, 598 F.3d at 850. “That ‘material or apparatus’ must be a material part of the invention, have no substantial noninfringing uses, and be known (by the party) ‘to be especially made or especially adapted for use in an infringement of such patent.’” *Id.* at

850–51 (quoting *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1312 (Fed. Cir. 2005).)

Evidence of sales of the infringing product along with instructions teaching the infringing use is enough to demonstrate direct infringement by customers. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301 (Fed. Cir. 2009).

DISCUSSION

The parties' dispute concerns limitations 2 and 3 of claim 1 of the '488 Patent, which recites the following:

A method for attaching an armored or metal clad electrical cable to a junction box comprising:

providing a junction box having an aperture;

providing a member having a leading end with an external cylindrical surface and a trailing end with an inner diameter;

providing a spring steel adapter surrounding said leading end external cylindrical surface for snap fitting into said aperture;

providing a spring steel loading ring inserted into said trailing end inner diameter;

restricting rearward withdraw motion of said spring steel locking ring from said member;

receiving and armored or metal clad cable in said steel locking ring; and

preventing removal of said armored or metal cable in a rearward direction from said spring steel locking ring.

U.S. Patent No. 6,335,488 col.9 l.27 – col.10 l.12 (issued Jan. 1, 2002) (emphasis added). Arlington contends that the Accused Connectors are not more than colorably different than the Enjoined Connectors because they still have "a leading end with an external cylindrical surface" and "a spring steel adapter that surrounds the leading end cylindrical surface." It further argues that the Accused Connectors both directly and indirectly infringe limitations 2 and 3 of claim 1 of the '488 Patent. Bridgeport responds that the Accused Connectors are more than colorably different because they have redesigned leading ends with "conical" external surfaces and lugs that jut through the

spring steel adapters. It also maintains that the Accused Connectors neither directly nor indirectly infringe limitations 2 and 3 of claim 1 of the ‘488 Patent.

I. Colorable Imitation Analysis

A. Limitation 2 – “[A] Leading End with an External Cylindrical Surface”

Limitation 2 of claim 1 of the ‘488 Patent refers to “a member having a leading end with an external cylindrical surface” (‘488 Patent col.9 l.30–32.) Although Arlington acknowledges that Bridgeport has modified the external surfaces on the Accused Connectors’ leading ends from the stepped shape of the Enjoined Connectors to a sloped shape, which Bridgeport describes as “conical,” it maintains that this change is insignificant in both form and function. (Doc. 52 at 17–19.) It also contends that the Accused Connectors’ leading end external surfaces perform substantially the same function in substantially the same way with substantially the same result as the Enjoined Connectors’ leading end external cylindrical surfaces and are thus no more than colorably different with respect to the “cylindrical” limitation of claim 1 of the ‘488 Patent.

1. Defining “an External . . . Surface”

Arlington contends that “an external . . . surface” of the connector’s leading end, mentioned in limitation 2 of claim 1 of the ‘488 Patent, refers to everything forward of the back flange of the connector’s leading end except for the lip. To support this assertion, it cites the ‘488 Patent specification, which indicates that “the lip and central flange define the boundaries of [the] reduced diameter seat,” which “will later accommodate a spring steel adapter.” (‘488 Patent col.7 l.34–38, fig.15.) The specification notes that the “[r]educed diameter area for receiving [the] adapter . . . is defined by [the] lip, which prevents [the] adapter from slipping out once inserted.” (‘488 Patent col.6 l.2–4, fig.6.) It also references a “smooth outer cylindrical section,” which “accommodates a spring steel adapter” and “has flanges at each end defining to hold the . . . adapter in place.” (‘488 Patent col.9 l.4–8.)

Bridgeport has offered different theories as to what constitutes “an external . . . surface” at different times in this proceeding. In its Brief in Opposition, Bridgeport noted

that the “[external] cylindrical surface” of the Enjoined Connectors’ leading ends is composed of a central cylinder that is flanked by two raised cylinders. (Doc. 74 at 13–14; Doc. 77 at ¶ 32.) At the hearing, however, Bridgeport argued that those three cylinders are in fact separate external cylindrical surfaces.

The Court agrees with Arlington that “an external . . . surface” of the connector’s leading end refers to everything forward of the back flange of the connector’s leading ends, except for the lip. This conclusion is based on the ‘488 Patent specification and accompanying embodiments. (‘488 Patent col.7 l.34–38, fig.15; ‘488 Patent col.6 l.2–4, fig.6.) Therefore, “an external . . . surface” of the Enjoined Connectors’ leading ends is composed of everything forward of the back flange of the leading ends, except for the lip—what Bridgeport has described as “the three cylinders.” Because Bridgeport has admitted that the Enjoined Connectors violate claim 1 of the ‘488 Patent, the Enjoined Connectors’ leading end external surfaces are thus “cylindrical,” as limitation 2 states that the leading end has “an external cylindrical surface.” Accordingly, the “external . . . surface” of the Accused Connectors’ leading ends² will be compared to the external cylindrical surfaces of the Enjoined Connectors to determine if they are more than colorably different from one another.

2. Colorable Differences Analysis

Arlington contends that the Accused Connectors are not more than colorably different than the Enjoined Connectors with respect to limitation 2 of claim 1 of the ‘488 Patent because they still have “a leading end with an external cylindrical surface.” Bridgeport counters that it has made significant changes to the Enjoined Connectors’ cylindrical surface, which is now conical on the Accused Connectors. (Doc. 74 at

² The Court agrees with Arlington that the lugs on the Accused Connectors are not a part of “an . . . external surface” because, like the lips of the Enjoined Connectors’ leading ends, they hold the adapter in place. (Doc. 74 at 12; Doc. 95, Ex. 4, at ¶ 11.) The lugs are not part of the Accused Connectors’ leading end external surfaces because no part of the connector body extends beyond them. (Doc. 95 at 35; Doc. 95, Ex. 4, at ¶ 11.)

14–15.) Arlington maintains that even though Bridgeport has modified the external surfaces on the Accused Connectors' leading ends from the stepped shape of the Enjoined Connectors to a sloped shape, this change is insignificant with respect to the "cylindrical" limitation. (Doc. 52 at 22–23.)

a. Arlington's Expert Witness

In support of its position, Arlington offers the expert testimony and declaration of Dr. Christopher Rahn, Professor of Mechanical Engineering and Director of the Mechatronics Research Laboratory at the Pennsylvania State University. In his declaration, Dr. Rahn notes that the external surfaces on the Accused Connectors' leading ends have been modified from the stepped shape of the Enjoined Connectors' leading end external cylindrical surfaces to a sloped shape via a slight taper. (Doc. 53 at ¶¶ 14–15.) However, he contends that this change is insignificant in form, application, and function and that the external surfaces of the Accused Connectors' leading ends are more cylindrical than conical. (*Id.* at ¶¶ 18–19; Doc. 95, Ex. 4, at ¶ 17.)

i. Form

Dr. Rahn opines that the changes to the Accused Connectors' leading end external surfaces is insignificant in form because "the measure in which the [external] surfaces of the [leading ends of the] Accused Connectors and Enjoined Connectors approximate a cylinder is almost identical." (Doc. 53 at ¶ 18.) To reach this conclusion, Dr. Rahn used a standard deviation analysis, which he believes is "[t]he best way to quantify whether a surface has the approximate form of a cylinder." (*Id.* at ¶ 16.) This analysis entails measuring diameters "evenly distributed across the surface" with calipers and calculating the standard deviation "of the surface shape from a perfect (right circular) cylinder with a fixed diameter along its length." (*Id.* at ¶ 18.) After performing those steps, Dr. Rahn found that the standard deviation of the external surfaces of both the 590-DCS and 590-DCSI connectors, which infringed the '488 Patent and thus had "an external cylindrical surface," was 5%, meaning that their external cylindrical surfaces deviated from a perfect cylinder by that amount. (*Id.* at ¶ 17, Ex. 4.) He also found that

the standard deviations of the external surfaces of the 38ASP and 380SP connectors were 4% and 3%, respectively. (*Id.* at ¶ 18, Ex. 4.) Based on this analysis, Dr. Rahn concluded that the change from the stepped leading end external cylindrical surfaces of the Enjoined Connectors to the sloped leading end external surfaces of the Accused Connectors is insignificant in form.³ (*Id.* at ¶ 18.)

Although Dr. Rahn believes that standard deviation is a better metric for determining the deviation of an external surface from a perfect cylinder than cylindricity,⁴ which Bridgeport's expert asserts is the internationally accepted standard method of measuring a zinc die cast connector's external surface, he also performed a cylindricity test on the Accused and Enjoined Connectors. (Doc. 95, Ex. 4, at ¶¶ 19, 22.) Using product dimensions taken from high quality drawings of the Accused and Enjoined Connectors, Dr. Rahn found that the leading end external surfaces of the Accused Connectors deviate from a perfect cylinder by 5.54%, whereas the leading end external cylindrical surfaces of the Enjoined Connectors deviate from a perfect cylinder by 5.46%.⁵ (*Id.* at ¶ 23.) He categorizes this 0.08% difference in cylindricity deviation

³ Dr. Rahn later performed the standard deviation analysis using dimensions taken from high quality drawings of the Accused and Enjoined Connectors. (Doc. 95, Ex. 4, at ¶ 23.) He found that the leading end external surfaces of the Enjoined Connectors and Accused Connectors deviated from a perfect cylinder by 5.05% and 3.93%, respectively. (*Id.* at ¶ 23, Ex. G.) The same figures result if the lips and lugs are included in the connectors' leading end external surfaces.

⁴ Dr. Rahn states that an object's cylindricity "is based on only two measurements or dimensions corresponding to the maximum and minimum diameter." (Doc. 95, Ex. 4, at ¶ 19.) He notes that although he initially considered reporting the cylindricity of the connectors' external surfaces, he opted to use standard deviation analysis because it "includes many diameters and gives a more representative deviation from a perfect cylinder for the entire surface." (*Id.*) He also believes that the cylindricity analysis used by Dr. Williamson is inapplicable here because such a test "is only applicable to the surfaces of perfect cylinders" and the "external cylindrical surface" described in limitation 2 of claim 1 of the '488 Patent is not required to be a perfect cylinder. (*Id.* at ¶ 20.)

⁵ If the lips or lugs of the leading end external surfaces of the Enjoined Connectors and Accused Connectors are included in the cylindricity calculation, the leading end external surfaces of the Accused Connectors deviate from a perfect cylinder

between the Accused Connectors and Enjoined Connectors as insignificant. (*Id.*)

Dr. Rahn performed these quantitative analyses in addition to a visual inspection of the Accused Connectors. For this inspection, Dr. Rahn created a figure which compares the leading ends of the Accused Connectors with perfect cylinders and cones that had the same length as the leading ends and the same average diameter. (Doc. 95, Ex. 4, at ¶ 17.) In his opinion, the shape of the Accused Connectors' leading ends are nearly identical to the perfect cylinder and "clearly different" from the cone, leading him to conclude that the external surfaces of the Accused Connectors' leading ends are more cylindrical than conical based on looks alone. (*Id.*)

ii. Function

Dr. Rahn further opined that the changes made to the Enjoined Connectors' external cylindrical surfaces were insignificant in application and function. (Doc. 53 at ¶ 19.) He notes that both the Accused and Enjoined Connectors "are . . . designed to fit in the same ½ inch round knockout holes with nominal diameters of 0.875 inch," [have] [t]he maximum diameter . . . at the same location . . . , immediately in front of the flange," "provide an external surface for a spring steel adapter to surround," "have similar interior diameters to allow the same size cables to pass through," (*Id.*), and "snap into the junction box hole without the use of a lock nut or tools" (*Id.* at ¶ 21).

Dr. Rahn tested the Accused Connectors to see if the 0.040" taper on their leading end external surfaces had any mechanical or electrical function. For these tests, he developed prototypes of the Accused Connectors with and without tapers on the external surfaces of their leading ends and mounted Bridgeport adapters to them. (Doc. 95, Ex. 4, at ¶¶ 57, 59.) With regard to mechanical function, Dr. Rahn found that the modified and unmodified Accused Connector prototypes function in the same way, as the adapters "were secured to and surrounded the leading end in the same manner" and

by 9.50%, whereas the leading end external cylindrical surfaces of the Enjoined Connectors deviate from a perfect cylinder by 9.43%. (Doc. 95, Ex. 4, at ¶ 24.) Dr. Rahn categorizes this 0.07% difference in cylindricity as insignificant. (*Id.*)

the connectors “snapped into a ½ inch hole in a pan box the same way” for both the tapered and non-tapered prototype connectors. (*Id.* at ¶ 57.) He also conducted resistance tests to measure the millivolt drop between the connectors and the boxes to see if the taper changed the way the Accused Connectors maintained good electrical conductivity.⁶ (*Id.* at ¶ 58.) After testing three unmodified prototypes and three modified prototypes, Dr. Rahn found that the average voltage drop of the modified prototypes was smaller than that of the unmodified prototypes, which led him to conclude that the taper on the Accused Connectors’ leading end external surfaces does not significantly change the grounding. (*Id.* at ¶ 59.) Dr. Rahn thus determined that the taper has no function, as it “does not change the way that the adapter is secured to and surrounds the leading end” or “the way that the adapter is grounded to the connector.” (*Id.* at ¶ 60.) He concluded that the Accused Connectors’ leading end external surfaces perform the same function in substantially the same way to produce substantially the same result as the Enjoined Connectors’ leading end external cylindrical surfaces, and are therefore not more than colorably different with respect to the “cylindrical” limitation. (*Id.*)

b. Bridgeport’s Expert Witnesses

Bridgeport offered the expert testimony and declarations of Mr. Walter Herbst, Clinical Professor of Mechanical Engineering and Director of the Master of Product Development Program at Northwestern University, and Dr. J. Brian P. Williamson, who has a Ph.D. in Surface Science and has worked in the electrical connective devices industry for several decades.

i. Form

Based on a visual analysis of the connectors, Prof. Herbst opines that there are more than colorable differences between the Accused Connectors’ leading end external

⁶ The resistance test was conducted as follows: “30 [amperes] of electrical current was passed through the housing to the box. The voltage drop was measured across the adapter between the housing and the box.” (Doc. 95, Ex. 4, at ¶ 58.) “A low voltage drop indicated low resistance and good grounding. A high voltage drop indicated high resistance and poor grounding.” (*Id.*)

surfaces and the Enjoined Connectors' leading end external cylindrical surfaces. (Doc. 78 at ¶ 26.) He asserts that the shape of the Accused Connectors' leading end external surfaces is a cone, which is "drastically different" than that of the Enjoined Connectors' leading end external cylindrical surfaces. (*Id.* at ¶¶ 24–25.) He also opines that the 0.040" taper of the Accused Connectors' leading end external surfaces provides this difference in shape from cylinder to cone and concludes that since such a difference could be appreciated by "[a]nyone with a basic education of shapes," Dr. Rahn "does not fully appreciate the distinct differences between basic shapes." (*Id.* at ¶¶ 27–30.)

Dr. Williamson similarly opines that the Accused Connectors are not colorable imitations of the Enjoined Connectors due to "significant re-design efforts." (Doc. 77 at ¶ 12.) He asserts that the Enjoined Connectors' leading external cylindrical surfaces had straight, parallel sides, but the Accused Connectors have a sloping, conical leading end external surfaces that accept the conical adapter. (*Id.* at ¶ 34.) Dr. Williamson believes that this substantial change is supported by the fact that a Mitutoyo Coordinate Measuring Machine ("CMM"), which "is accepted worldwide as the standard instrument for measuring shapes," was unable to identify the Accused Connectors' leading end external surfaces as a cylinder or find any similarity between their leading ends and a cylinder. (*Id.* at ¶¶ 91–92.)

Dr. Williamson also challenges Dr. Rahn's use of standard deviation analysis, which "is wholly unrelated to determining the form tolerances of a structure," "is not a recognized method nor a standard procedure approved by any . . . mechanical engineering institute" for such a purpose, and whose "inappropriate nature . . . is clearly shown by the fact that Professor Rahn finds the leading ends of the [Accused Connectors] to be more closely cylindrical . . . than those of the [Enjoined Connectors]." (*Id.* at ¶¶ 38, 40.) Instead of using standard deviation methodology to assess the cylindricity of a manufactured component, Dr. Williamson uses the "internationally accepted standard for how cylindricity should be assessed" published by the American

Society of Mechanical Engineers (“ASME”).⁷ (*Id.* at ¶ 40.) Employing such methodology, Dr. Williamson found that the shapes of the Accused Connectors’ leading end external surfaces deviated significantly further from a cylinder than those of the Enjoined Connectors by a ratio of 7 to 4. (*Id.* at ¶ 41.)

ii. Function

In addition, Dr. Williamson opines that the Accused Connectors function differently than the Enjoined Connectors due to their reduced leading end diameter. (Doc. 77 at ¶ 24). He asserts that the Accused Connectors’ leading ends have space to enter the hole of a junction box at an angle, which produces a greater tolerance for misalignment than the Enjoined Connectors and therefore makes it easier and quicker to insert the connectors, especially when the hole of the junction box is difficult to see or reach. (*Id.*) He cites the ease with which the Accused Connectors can be removed from a junction box and later be re-used due to the conical shape of their leading ends. (*Id.* at ¶ 15.) Dr. Williamson also opines that the taper on the Accused Connectors’ leading end external surfaces change the way that they maintain good electrical contact to the wall of the junction box. (*Id.* at ¶ 22.)

c. Conclusion

The Court agrees with Arlington that the leading end external surfaces of the Accused Connectors are not more than colorably different than the leading end external cylindrical surfaces of the Enjoined Connectors. As demonstrated by the standard deviation and cylindricity analyses performed by Dr. Rahn, the change from the stepped shape of the Enjoined Connectors’ leading end external cylindrical surfaces to the

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According to Dr. Williamson, ASME Standard Y14.5-2009 “measures the difference between the radius of the smallest true cylinder that fits over the outside of the shape being assessed and that of the largest true cylinder that fits inside it.” (Doc. 77 at ¶ 41.) “The relative cylindricity of two shapes can then be assessed by determining this radial difference for both of them, and quoting the ratio of the two results.” (*Id.*) He emphasizes that, unlike Dr. Rahn’s standard deviation method, the ASME “measure of relative cylindricity is valid even when comparing cylinders of different diameters.” (*Id.*)

sloped shape of the Accused Connectors' leading end external surfaces is insignificant.⁸ The mechanical and electrical function tests performed by Dr. Rahn also show that the Accused Connectors' leading end external surfaces are not substantially different in application or function than those of the Enjoined Connectors. Therefore, the Court finds that Arlington has demonstrated by clear and convincing evidence that the Accused Connectors' leading end external surfaces perform substantially the same function in substantially the same way with substantially the same result as the Enjoined Connectors' leading end cylindrical surfaces—*i.e.*, that they are not more than colorably different. Both leading end external surfaces connect the spring steel adapter to the connector's leading end (function) by providing a surface area for the adapter to surround (way) so that the adapter is mechanically and electrically connected to the leading end (result).

B. Limitation 3 – “[A] Spring Steel Adapter Surrounding Said Leading End External Cylindrical Surface”

Limitation 3 of claim 1 of the '488 patent refers to “a spring steel adapter surrounding said leading end external cylindrical surface for snap fitting” ('488 Patent col.10 l.1–3.) Arlington contends that the Accused Connectors, like the Enjoined Connectors, have a spring steel adapter surrounding the leading end external cylindrical surface. (Doc. 52 at 27.) Bridgeport counters that because the Accused Connectors' leading ends have lugs that jut through the sides of the adapter, the leading ends are not encircled by the adapter and therefore are not “surrounded” by it. (Doc. 74 at 20.)

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The Court rejects Dr. Williamson's relative cylindricity calculation, which included the lugs on the Accused Connectors but not the lips on the Enjoined Connectors and thus resulted in an inconsistent comparison. Dr. Rahn correctly notes that an accurate comparison between the Accused and Enjoined Connectors must either include or exclude both the lips and the lugs. (Doc. 95, Ex. 4, at ¶ 26.) He is also correct that no matter which “apples to apples” comparison is used, the relative cylindricity is nearly 1, which demonstrates that the Accused Connectors' leading end external surfaces are not more than colorably different from the Enjoined Connectors' leading end external cylindrical surfaces. (*Id.*)

1. Colorable Differences Analysis

a. Arlington's Expert Witness

Dr. Rahn opines that the Accused Connectors are not more than colorably different than the Enjoined Connectors with respect to the “surrounding” limitation of claim 1 of the ‘488 Patent because the adapters on the Accused Connectors “significantly border the leading end the same way as the Enjoined Connectors.” (Doc. 95, Ex. 4 at ¶ 29.) He also opines that “[t]o surround the leading end of the connector, the adapters need to significantly border the circumference of the leading end [external] cylindrical surfaces, which these adapters clearly do. Both connectors snap into the junction box hole without the use of a lock nut or tools.” (Doc. 53 at ¶ 21.)

Arlington also contends that colorable imitation with respect to “surrounding” was conclusively decided in the ‘0485 Action, in which the Enjoined and Accused Connectors were also at issue. In that action, a jury found that the Accused Connectors literally infringed Claim 8 of the ‘050 Patent and were also colorable imitations of the Enjoined Connectors. See *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 692 F. Supp. 2d 487, 497 (M.D. Pa. 2010). Claim 8 of the ‘050 Patent required the adapter to “surround”⁹ the entire leading end of the connector.¹⁰ (‘050 Patent, col.10 l.35–36.) Claim 1 of the ‘488 Patent, which incorporates a sibling of the ‘050 Patent in its entirety, only requires the adapter to “surround” the external cylindrical surface of the connector’s leading end. (‘488 Patent, col.10 l.1–2.) Arlington reasons that because the Accused Connectors, which infringe Claim 8 of the ‘050 Patent and thus have spring steel adapters that “surround” their entire leading ends, were found to be colorable imitations of the

⁹ In the ‘0485 Action, Judge Conner construed the term “surrounding” in the context of the ‘050 Patent to mean “significantly borders” rather than “completely envelopes.” *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 290 F. Supp. 2d 508, 521–22 (M.D. Pa. 2003).

¹⁰ In its Pretrial Memorandum in the ‘0485 Action, Bridgeport did not dispute that, with respect to Claim 8 of the ‘050 Patent, the Accused Connectors had “a circular spring metal adapter surrounding said leading end.” (Doc. 129 at 15–16.)

Enjoined Connectors, which infringe Claim 1 of the ‘488 Patent and thus have spring steel adapters that “surround” their leading end external cylindrical surfaces, the Accused Connectors must also have spring steel adapters that “surround” their external cylindrical surfaces.

b. Bridgeport’s Expert Witness

Dr. Williamson opines that the Accused Connectors are more than colorably different than the Enjoined Connectors with respect to the “surrounding” limitation, as the adapters on the Enjoined Connectors surrounded the leading end external cylindrical surfaces but the lugs on the Accused Connectors poke through the adapters and are thus not encircled by them. (Doc. 77 at ¶¶ 27, 93.)

c. Conclusion

The Court agrees with Arlington that the Accused Connectors are not more than colorably different than the Enjoined Connectors with respect to the “surrounding” limitation of claim 1 of the ‘488 Patent. The Court finds that Arlington has shown by clear and convincing evidence that the spring steel adapters “surrounding” the Accused Connectors’ leading end external cylindrical surfaces perform substantially the same function in substantially the same way with substantially the same result as the spring steel adapters “surrounding” the Enjoined Connectors’ leading end external cylindrical surfaces. Both connect the adapter to the connectors’ leading end external cylindrical surfaces (function) by the adapter significantly bordering and contacting the external cylindrical surfaces (way) so as to electrically and mechanically connect the adapter to the connectors’ leading end external cylindrical surfaces (result). This conclusion is also supported by the fact that the Accused Connectors, which infringe Claim 8 of the ‘050 Patent and thus have spring steel adapters that “surround” their entire leading ends, were found to be colorable imitations of the Enjoined Connectors, which infringe Claim 1 of the ‘488 Patent and thus have spring steel adapters that “surround” their leading end external cylindrical surfaces.

In sum, the Court finds that the Accused Connectors are not more than colorably

different than the Enjoined Connectors with respect to limitations 2 and 3 of Claim 1 of the ‘488 Patent. As this Court has not previously construed the ‘488 Patent, “cylindrical” and “surrounding” will now be construed in order to undertake the infringement analysis required by *TiVo*. As previously stated by this Court, any claim construction in this matter must be faithful to Bridgeport’s admission that the Enjoined Connectors infringed the ‘488 Patent and thus met each limitation in the ‘488 Patent. (Doc. 129 at 9.)

II. Claim Construction

A. Limitation 2 – “[A] Leading End with an External Cylindrical Surface”

1. Intrinsic Evidence

Limitation 2 of claim 1 of the ‘488 Patent requires “a member having a leading end with an external cylindrical surface” (‘488 Patent col.9 l.30–32.) The ‘488 Patent specification describes “a die cast member having a smooth outer cylindrical section” that “has flanges at each end.” (‘488 Patent col. 9 l.4–7.)

2. Extrinsic Evidence

a. Arlington’s Proposed Construction

Dr. Rahn opines that a person of ordinary skill in the relevant art would construe “an external cylindrical surface,” as used in claim 1 of the ‘488 Patent, as “a surface on the outside of the leading end [of the connector] having the approximate form of a cylinder” (Doc. 53 at ¶ 36) and know that the exact shape of a perfect cylinder cannot be realized in practice (Doc. 95, Ex. 4 at ¶ 32).¹¹ Dr. Rahn points to the ‘488 Patent specification, which references “a die cast member having a smooth outer cylindrical section” and the flanges at each end of “[t]he smooth cylindrical section” (‘488 Patent col. 9 l.4–7.) In addition, he notes that all of the relevant embodiments provided as examples in the ‘488 Patent specification show the cylindrical surface, labeled as the

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Based on his “experience and understanding of the electrical connector industry and the technology described in the ‘488 Patent,” Dr. Rahn defines one with “ordinary skill in the relevant art” as “someone with a high school education and one year’s training or experience working for an electrical connector manufacturer.” (Doc. 53 at ¶ 31.)

seat, “with varying cross sections, not one cross section that remains constant along the body’s axial length.” (‘488 Patent figs. 6, 15; Doc. 53 at ¶ 38; Doc. 95, Ex. 4 at ¶ 33.) Because the ‘488 Patent specification does not disclose any embodiments with a cylindrical surface that is the exact shape of a perfect cylinder, Arlington contends that Bridgeport’s proposed construction of “cylindrical” must be denied. (Doc. 95, Ex. 2 at 23–25.) He also posits that “having the approximate form of a cylinder” is the plain and ordinary meaning of “cylindrical” and cites Webster’s definition of “cylindrical” as “relating to or having the form or properties of a cylinder.” (Doc. 53 at ¶ 38.)

Arlington contends that its proposed construction of “cylindrical” is consistent with the construction that I issued in the “1105 Action,” which construed “cylindrical” with regard to a connector’s “outbound end” described in claim 1 of U.S. Patent No. 6,521,831 (“the ‘831 Patent”)¹² to mean “having the approximate form of a cylinder” and rejected Bridgeport’s proposed construction of “shaped like a cylinder, with a cross-section that is constant along its length.” *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, No. 06-CV-1105, 2007 WL 4276565, at * 13 (M.D. Pa. Dec. 4, 2007). Arlington maintains that although the ‘488 and ‘831 Patents do not derive from the same application, their use of “cylindrical” is similar because they include the same disclosure, as the ‘488 Patent is a continuation of the ‘933 Patent.¹³ (Doc. 52 at 36.)

¹² U.S. Patent No. 6,194,661 (“the ‘661 Patent”) “described a duplex connector that combines the spring steel adapter and spring steel locking ring of [U.S. Patent No. 6,080,993 (“the ‘993 Patent”)] with a novel connector to connect two helically wound armored or metal clad electrical conductors to a junction box or electrical panel through a single access hole or knockout. The ‘831 Patent is a duplex connector that is simpler than the duplex connector of the ‘661 Patent.” *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, No. 06-CV-1105, 2007 WL 4276565, at *2 n.2 (M.D. Pa. Dec. 4, 2007).

¹³ “The ‘933 Patent describes a locking cable connector composed of three mating pieces that snap together and provide a connector for connecting helically wound armored or metal clad electrical conductors to junction boxes or electrical panels. One of these three mating pieces is a spring steel adapter. Another is a spring steel locking ring.” *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, No. 06-CV-1105, 2007 WL 4276565, at *2 n.2 (M.D. Pa. Dec. 4, 2007).

b. Bridgeport's Proposed Construction

Dr. Williamson opines that a “cylindrical surface” should be construed as “the surface of a straight elongated body that has a circular cross-section which remains constant along the body’s axial length” because a person having ordinary skill in the art would interpret it as such.¹⁴ (Doc. 77 at ¶¶ 66, 71.) He contends that a cylindrical surface does not taper. (*Id.* at ¶ 66.) Dr. Williamson points to the patentee’s descriptions of the connector’s “spring steel locking ring” as “generally cylindrical” (‘488 Patent col. 5 l.2–3, 13–14; ‘488 Patent col. 10 l.18–19) as evidence that when the patentee wished to describe a shape that deviated from a one that is straight with a constant, circular cross-section, he did so. (*Id.* at ¶ 69.)

Prof. Herbst also opines that a person of ordinary skill in the art would understand “cylindrical” to mean “an elongated body that has a circular cross-section which remains constant along the body’s axial length.”¹⁵ (Doc. 78 at ¶ 12.) He is of the opinion that “cylindrical” clearly refers to a shape that has straight, parallel sides”—i.e., “a true cylinder”—because the patentee used “generally cylindrical” elsewhere in the ‘488 Patent to refer to shapes that “could deviate slightly from a true cylinder.” (*Id.* at ¶ 15.)

c. Conclusion

“Cylindrical” should be interpreted to mean “having the approximate form of a cylinder.” This construction is based on the ‘488 Patent specification and accompanying embodiments, which portray an external cylindrical surface on the leading end of a connector that has varying cross-sections along its axial length. These embodiments do

¹⁴ According to Dr. Williamson, a person having ordinary skill in the art would either have a degree in a relevant branch of engineering (e.g., electrical or mechanical) and two or three years’ experience in the industry, or, alternatively, a trade school or high school degree and four or five years’ experience in the industry. (Doc. 77 at ¶ 44.)

¹⁵ Although Prof. Herbst does not offer his own definition of “a person of ordinary skill in the art,” he notes that his opinion is the same whether Dr. Rahn’s definition or Dr. Williamson’s definition is used. (Doc. 78 at ¶ 13.)

not meet Bridgeport's proposed construction, and claim interpretation that excludes a patentee's preferred embodiment is rarely the correct interpretation. See *Funai Elec. Co., Ltd. v. Daewoo Elecs. Corp.*, 616 F.3d 1357, 1371 (Fed. Cir. 2010) (citing *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1581 (Fed. Cir. 1996)). The '488 Patent supports the conclusion that "cylindrical" means "having the approximate form of a cylinder," and does not limit the claim to only external surfaces that have a circular cross-section which remains constant along their axial length. In short, "cylindrical" is not the equivalent of a perfect cylinder.

B. Limitation 3 – "[A] Spring Steel Adapter Surrounding Said Leading End External Cylindrical Surface"

1. Intrinsic Evidence

Limitation 3 of claim 1 of the '488 patent requires "a spring steel adapter surrounding said leading end external cylindrical surface for snap fitting . . ." ('488 Patent col.10 l.1–3.)

2. Extrinsic Evidence

a. Arlington's Proposed Construction

Arlington contends that the correct claim construction for "surrounding" is "significantly bordering" because in the '0485 Action, Judge Conner construed the phrase "spring metal adapter surrounding said leading end" in the '050 and '164 Patents to mean "an adapter that significantly borders the circumference of the 'leading end' of the connector."¹⁶ *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 290 F. Supp. 2d 508, 521–22 (M.D. Pa. 2003). Dr. Rahn opines that this construction is appropriate in this

¹⁶ Judge Conner noted that the claims of the '050 and '164 Patents "do not describe an adapter that 'completely' or 'entirely' surrounds the connector. Such limiting language would connote an item that totally encircles, without breaks, the underlying connector. That the patentee chose not to use this language suggests that such a limited meaning was not intended." *Arlington*, 290 F. Supp. 2d 508, 521 n.7 (M.D. Pa. 2003). "Thus, 'surrounding' is not necessarily limited to circumstances in which a force or thing completely envelopes . . . an individual or item. Rather, the term may be used more loosely to describe any situation in which an outer boundary significantly borders an underlying entity." *Id.* at 521.

matter because the disclosure of the ‘488 Patent is almost identical to the context of the ‘050 Patent, as the ‘488 Patent incorporates by reference the ‘106 Patent, which is a sibling of the ‘050 Patent, in its entirety. (Doc. 95, Ex. 4, at ¶ 43.)

b. Bridgeport’s Proposed Construction

Dr. Williamson opines that a person having ordinary skill in the art would construe “spring steel adapter surrounding said leading end external cylindrical surface” to mean that “the die case connector body has a spring steel adapter that is on the outside of the smooth cylindrical section and which encircles the external cylindrical surface.” (Doc. 77 at ¶ 74.)

c. Conclusion

“Surrounding” should be construed to mean that the spring steel adapter “significantly borders” the connector’s leading end external cylindrical surface, as Arlington argues, rather than “[completely] encircles” the external cylindrical surface. This is supported by the embodiments in the ‘488 and ‘106 Patents¹⁷ (‘488 Patent fig.1, ‘106 Patent fig.5, 20, 22) as well as the prior claim construction of the ‘050 and ‘164 Patents issued by Judge Conner in the ‘0485 Action. See *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003) (“[W]e presume, unless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning.”); see also *Realtime Data, LLC v. Stanley*, 875 F. Supp. 2d 276 (S.D.N.Y. 2012) (treating the sibling of a patent incorporated by reference into an asserted patent as a related patent of the asserted patent).

Having construed “cylindrical” and “surrounding,” as used in claim 1 of the ‘488 Patent, the Court will now conduct the infringement analysis required by *TiVo*. As the Court has concluded that there are no more than colorable differences between the

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“When a document is ‘incorporated by reference’ into a host document, such as a patent, the referenced document becomes effectively part of the host document as if it were explicitly contained therein.” *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 274 F.3d 1316, 1329 (Fed. Cir. 2001).

Enjoined Connectors and Accused Connectors, a finding that the Accused Connectors infringe claim 1 of the ‘488 Patent will result in Bridgeport being found in contempt for violating the Confession of Judgment and Injunction. See *TiVo*, 646 F.3d at 883.

III. Infringement Analysis

A. Direct Infringement

The Court finds that Arlington has carried its burden of demonstrating by clear and convincing evidence that the Accused Connectors have leading end external surfaces that are “cylindrical”—*i.e.*, having “the approximate form of a cylinder.” Dr. Rahn’s analyses, both visual and quantitative, convince the Court that this is so. His standard deviation analysis shows that the leading end external surfaces of the Accused Connectors deviate from a perfect cylinder by 3–4%, which is less than the 5% deviation present in the Enjoined Connectors’ leading end external cylindrical surfaces. He also took consistent measurements and used cylindricity analysis, the method preferred by Dr. Williamson, which shows that the Accused Connectors’ leading end external surfaces deviate from a perfect cylinder by 5.54%, which is insignificantly different from the 5.46% deviation of the Enjoined Connectors’ leading end external cylindrical surfaces. Therefore, because Arlington has shown by clear and convincing evidence that the Accused Connectors have leading end external surfaces that have the approximate form of a cylinder, they meet limitation 2 of claim 1 of the ‘488 Patent.

The Court also finds that Arlington has demonstrated by clear and convincing evidence that the Accused Connectors have spring steel adapters “surrounding”—*i.e.*, “significantly bordering”—their leading end external cylindrical surfaces. In the ‘048 Action, the Accused Connectors were found to infringe claim 8 of the related ‘050 Patent, which required the spring steel adapter to “surround”—construed by Judge Conner to mean “significantly border”—the connector’s leading end. The Accused Connectors are not more than colorably different than the Enjoined Connectors, which infringe claim 1 of the ‘488 Patent and thus have spring steel adapters that “surround”—*i.e.*, “significantly border”—their leading end external cylindrical surfaces,

with respect to the “surrounding” limitation of claim 1 of the ‘488 Patent. It follows that the spring steel adapters must also significantly border the Accused Connectors’ leading end external cylindrical surface. Accordingly, because Arlington has shown that the Accused Connectors have spring steel adapters that significantly border the leading end external cylindrical surfaces, they also meet limitation 3 of claim 1 of the ‘488 Patent.

In addition, the Court finds that Arlington has shown by clear and convincing evidence that Bridgeport directly infringes claim 1 of the ‘488 Patent by performing all of the steps of the process described in the claim. In its online promotional videos (Pl.’s Exs. 73, 89), Bridgeport uses its Whipper-Snap connectors to perform all the steps of claim 1’s “method for attaching an armored or metal clad electrical cable to a junction box” while instructing end users on how to do the same.

Because the Court finds that Arlington has demonstrated by clear and convincing evidence that the Accused Connectors meet limitations 2 and 3 of claim 1 of the ‘488 Patent and that Bridgeport performs all of the steps of the process described in claim 1, Arlington has carried its burden and demonstrated that Bridgeport is a direct infringer of claim 1 of the ‘488 Patent pursuant to pursuant to 35 U.S.C. § 271(a).

B. Indirect Infringement

Arlington further contends that Bridgeport indirectly infringes of the ‘488 Patent pursuant to 35 U.S.C. § 271(b) by knowingly inducing end users’ infringement of claim 1 of the ‘488 Patent and possessing specific intent to encourage that infringement. (Doc. 95, Ex. 2 at 39.) As evidence of Bridgeport’s knowing inducement and specific intent, Arlington points to Bridgeport’s online promotional videos, which demonstrate how the Whipper-Snap connectors work and instruct end users on how to use them. (*Id.* at 40.) In one such video, Bridgeport’s Technical Sales Manager verbally instructs the viewer on how to use Whipper-Snap connectors as he inserts an armor-clad (“AC”) or metal-clad (“MC”) cable into the trailing end of a 38ASP connector and then snaps the connector into a hole in the junction box. (Pl.’s Ex. 73.) In another, a narrator instructs the viewer to “snap the cable into the connector” and then “snap the assembly into the half inch

knockout on the electrical box” as an individual performs those same steps. (Pl.’s Ex. 89.) Arlington also presents evidence of Bridgeport’s sales of the Accused Connectors. (Doc. 184 at 198:1–10.)

The Court finds that Arlington has shown by clear and convincing evidence that Bridgeport induces infringement of claim 1 of the ‘488 Patent. By presenting evidence of sales of the Accused Connectors and Bridgeport’s instructions that teach the infringing use of the connectors, Arlington has demonstrated direct infringement by Bridgeport’s customers. See *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301 (Fed. Cir. 2009). Arlington has also shown that Bridgeport actively, knowingly, and with the requisite intent induces end users’ infringement by instructing them on how to use the Whipper-Snap connectors in a way that infringes all limitations of claim 1 of the ‘488 Patent through its online promotional videos. See *Akami Tech., Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301, 1308 (Fed. Cir. 2012). (“It is enough that the inducer ‘cause[s], encourage[s], or aid[s]’ the infringing conduct and that the induced conduct is carried out.”) Accordingly, Bridgeport induces infringement of claim 1 of the ‘488 Patent.

In sum, the Court finds by clear and convincing evidence that the Accused Connectors meet limitations 2 and 3 of claim 1 of the ‘488 Patent and that Bridgeport both directly and indirectly infringes claim 1 of the ‘488 Patent. As this Court has already found that the Accused Connectors are not more than colorably different than the Enjoined Connectors with respect to limitations 2 and 3 of claim 1 of the ‘488 Patent, Bridgeport has violated the Confession of Judgment and Injunction (Doc. 47) and will be held in contempt of this Court’s January 18, 2012 Order (Doc. 46).¹⁸

¹⁸ In its Motion for Contempt, Arlington asks the Court to order Bridgeport to pay two times Arlington’s lost profits for any sales made in violation of the Confession of Judgment and Injunction as well as Arlington’s attorneys’ fees incurred as a result of the contempt motion, both in an amount to be determined. (Doc. 51 at ¶ 8.) The parties should attempt to resolve the questions of lost profits and attorneys’ fees amicably. Failing that, the parties should contact the Court, and the Court will schedule a hearing or hearings to resolve the issues of lost profits and counsel fees.

CONCLUSION

For the foregoing reasons, the Court will grant Arlington's motion for contempt. The Court will hold Bridgeport in contempt for violating the Confession of Judgment and Injunction through the sale of the Accused Connectors, and enjoin Bridgeport from selling the Accused Connectors for the duration of the '488 Patent.

An appropriate order follows.

March 19, 2013
Date

/s/ A. Richard Caputo
A. Richard Caputo
United States District Judge